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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,480	11/28/2000	Dave McDysan	RIC00044	7587

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EXAMINER

BATES, KEVIN T

ART UNIT PAPER NUMBER

2155

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/723,480	Applicant(s) MCDYSAN ET AL.	
	Examiner Kevin Bates	Art Unit 2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9-16-05</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

This Office Action is in response to a communication made on November 16, 2005.

The Information Disclosure Statement has been received on September 16, 2005 and has been considered.

Claims 1, 21, and 40 have been amended.

Claims 1-40 are currently pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-9, 11-15, 20-24, 26-29, 30-34, and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (6434618) in view of Bhattacharya (6587466).

Regarding claims 1 and 21, Cohen teaches a method of communication in, a network access system including a processor (Column 4, lines 14 – 16) and a programmable access device (Column 3, lines 19 – 21), said method comprising: transmitting a control message from the processor to the programmable access device to establish a configuration of the programmable access device (Column 10, lines 56 – 63; Column 11, lines 55 – 62, where the dispatcher with the packet filter has

programmed flows to allow to pass and those flows can be changed by the gateway programs and the admission daemon; Column 10, lines 25 – 28); receiving, by the programmable access device, messages from a first network external to the network access system via a first network interface (Column 3, lines 36 – 40); communicating a first portion of the received messages from the programmable access device to the processor for service processing in accordance with the configuration (Column 4, lines 14 – 16); and routing a second portion of the received messages not communicated to the external processor from the network access system via a second network interface different (Column 4, lines 19 – 29) from the first network interface to a second network external to the first network access system, wherein the second network is different from the first network (Column 4, lines 19 – 29).

Cohen teaches that processor handling some of the packets to be a process on the programmed gateway, not an external processor.

Bhattacharya teaches a system that has an edge device that handles packets, but is coupled to an external processor that can make policy decisions on some of the packets received (Column 12, lines 8 – 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Bhattacharya's teaching of having an external server handling the policy decisions in an edge device in Cohen's system in order to outsource the policy decisions freeing up the policy server to handle more than just one access device (Column 12, lines 12 – 14).

Regarding claim 40, Cohen teaches a distributed router comprising: a first network interface through which packets are communicated with a first network (Column 3, lines 36 – 40); a second network interface different from the first network interface through which packets are communicated with a second network different from the first network (Column 4, lines 19 – 29); a programmable access device configured to input messages from the first network via the first network interface (Column 3, lines 19 – 21); and an processor configured to receive, from the programmable access device (Column 4, lines 14 – 16), a first portion of the input messages (Column 4, lines 14 – 16) and to transmit a control message to the programmable access device specifying a configuration to control the selection of the first portion (Column 10, lines 56 – 63; Column 11, lines 55 – 62, where the dispatcher with the packet filter has programmed flows to allow to pass and those flows can be changed by the gateway programs and the admission daemon; Column 10, lines 25 – 28), wherein the programmable access device forwards a second portion of the input messages not received by the external processor for routing via the second network interface to the second network (Column 4, lines 19 – 29).

Cohen teaches that processor handling some of the packets to be a process on the programmed gateway, not an external processor.

Bhattacharya teaches a system that has an edge device that handles packets, but is coupled to an external processor that can make policy decisions on some of the packets received (Column 12, lines 8 – 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Bhattacharya's teaching of having an external server handling the policy decisions in an edge device in Cohen's system in order to outsource the policy decisions freeing up the policy server to handle more than just one access device (Column 12, lines 12 – 14).

Regarding claim 2 and 22, Cohen teaches that transmitting a control message comprises transmitting a filter control message to establish a configuration of a packet header filter in the programmable access device (Column 5, lines 20 – 25; Column 5, line 66 – Column 6, line 9); and communicating messages comprises communicating network messages filtered from a packet flow by the packet header filter of the programmable access device (Column 4, lines 11 – 16; Column 5, lines 40 – 48).

Regarding claim 3 and 23, Cohen discloses limiting communication of network messages from the programmable access device to the external processor by sending the programmable access device a message setting message interface flags in the programmable access device (Table 1; Column 6, lines 52 – Column 7, line 36, it shows that variables/flags that get set to program the dispatcher on how to operate).

Regarding claims 4 and 24, Cohen teaches transmitting a control message comprises transmitting a monitor control message to establish a configuration of a monitor in the programmable access device (Column 10, lines 25 – 28); and communicating messages comprises communicating reporting messages from the programmable access device to the external processor in response to the configuration of the monitor (Column 10, lines 28 – 32).

Regarding claims 6 and 26, Cohen teaches indicate transmitting a monitor control message comprises transmitting a threshold activity level (Column 10, lines 7 – 24).

Regarding claim 7 and 27, Cohen teaches transmitting a control message comprises transmitting a policer control message to establish a configuration of a policer in the programmable access device (Column 10, lines 7 – 24).

Regarding claims 8 and 28, Cohen teaches transmitting a control message comprises transmitting a forwarding table control message to establish a configuration of a forwarding table in the programmable access device (Column 10, lines 13 – 15).

Regarding claim 9, Cohen teaches establishing a configuration of a forwarding table comprises establishing a new forwarding table in the programmable access device (Column 10, lines 28 – 42).

Regarding claim 11 and 30, Cohen teaches teaches transmitting a control message comprises transmitting a shaper control message to establish a configuration of a shaper in the programmable access device (Column 10, lines 21 – 23).

Regarding claim 12 and 31, Cohen teaches teaches transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a control message specifying a source from which packets are not to be accepted; and the method further comprises dropping packets from the specified source by the programmable access device (Column 9, lines 6 – 18).

Regarding claim 13 and 32, Cohen teaches indicate that in response to service processing by the external processor, injecting a packet from the external processor into packet flow through the programmable access device (Column 4, lines 51 – 55).

Regarding claims 14 and 33, Cohen teaches transmitting a control message from the external processor to the programmable access device to establish a configuration of the programmable access device comprises transmitting a session deletion control message; and the method further comprises the programmable access device deleting a session specified by the session deletion control message (Column 10, lines 56 – 63; Column 11, lines 55 – 62).

Regarding claims 15 and 34, Cohen teaches the external processor signaling network hardware to establish a network connection in response to receipt of a message from the programmable access device (Column 11, lines 53 – 62).

Regarding claims 20 and 39, the combination of Cohen and Bhattacharya teaches transmitting a control message comprises transmitting a control message via an intermediate communication network (Bhattacharya, Column 12, lines 8 – 12).

Claims 5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Bhattacharya as applied to claims 1-4, 6-9, 11-15, 20-24, 26-29, 30-34, and 39-40 above, and further in view of Haas (5115432).

Regarding claim 5 and 25, Cohen teaches the method of claims 1 and 21.

Cohen does not explicitly indicate transmitting a monitor control message comprises transmitting a control message to establish a threshold number of allowed retransmissions.

Haas teaches that an access device's configured policy should include a retransmissions policy (Column 7, lines 45 – Column 8, line 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Haas' teachings of a retransmission policy on Gibson's network node reconfiguration system in order to give the network management a tool to help reduce congestion in the system and obtain optimal performance (Column 7, lines 58 – 61).

Claims 16, 18, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Bhattacharya as applied to claims 1-4, 6-9, 11-15, 20-24, 26-29, 30-34, and 39-40 above, and further in view of Feldman (6055561).

Regarding claims 16, 18, 35, and 37, Cohen teaches the method of claims 1 and 21.

Cohen in combination with Bhattacharya does not explicitly indicate exchanging keepalive and acknowledgment messages between the external processor and the programmable access device.

Feldman discloses a network system with network nodes and teaches acknowledgement and keepalive messages are communicated between the nodes (Figure 5; Column 9, line 65 – Column 10, line 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Feldman's teaching of keepalive messages and acknowledgements in Cohen's and Bhattacharya's system in order to know that the

communication paths are still open and the communications are being received
(Column 9, line 65 – Column 10, line 11).

Claims 17 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Bhattacharya as applied to claims 1-4, 6-9, 11-15, 20-24, 26-29, 30-34, and 39-40 above, and further in view of Sauter (5537546).

Regarding claim 17 and 36, Cohen teaches the method of claims 1 and 21.

Cohen does not explicitly indicate transmitting a control message comprises accessing a control processor on the external processor via an application programming interface (Column 11, lines 14 – 17).

Sauter teaches managing a network node with an API (Column 3, lines 40 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Sauter's teaching in having the nodes operate according to an API to allow lots of different editors to manage the contents and the configuration of the external processor (Column 1, lines 34 – 45).

Claims 19 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Bhattacharya as applied to claims 1-4, 6-9, 11-15, 20-24, 26-29, 30-34, and 39-40 above, and further in view of Grant (5027269).

Regarding claims 19 and 38, Cohen teaches the method of claims 1 and 21, and further comprising communicating a state of a session from the programmable access device to the external processor (Column 10, lines 28 – 44).

Cohen does not explicitly indicate that in response to failure of a service controller servicing the session in the external processor (Column 22, line 63 – Column 23, line 3).

Grant discloses a system for failure recovery where in the detection of failure in a system where data is lost (Column 4, lines 42 – 51) sending a request for state of a session information (Column 4, line 67 – Column 5, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Grant's teaching in the combination of Cohen and Bhattacharya in order to allow the external processor to recover the data that was lost as result of a fault (Column 2, lines 46 – 65).

Claims 10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Bhattacharya as applied to claims 1-4, 6-9, 11-15, 20-24, 26-29, 30-34, and 39-40 above, and further in view of Gai (6651096).

Regarding claim 10 and 29, Cohen teaches the method of claims 1 and 21.

Cohen in view of Bhattacharya does not explicitly indicate transmitting a control message comprises transmitting a control message to establish a configuration of a scheduler and one or more associated output buffers in the programmable access device.

Gai discloses a system for controlling the configuration of an access device that includes making configuration changes to a scheduler and has one or more output queues (Column 6, lines 19 – 28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of configuring a scheduler on an access device in Cohen's system in order to ensure QoS treatments for data flows (Column 6, lines 18 – 21).

Response to Arguments

Applicant's arguments filed November 16, 2005 have been fully considered but they are not persuasive.

The applicant argues that the combination of Cohen and Bhattacharya was made in hindsight, would not make a proper combination, and would create unnecessary complexity. The examiner disagrees, Cohen teaches a programmed network element (Column 2, lines 6 – 10) which includes a dispatcher running on a Linux OS that operates according to dynamically loaded and invoked programs (Column 2, lines 37 – 44), that processor receives packets for processing, after receiving the packet it decides whether it can act upon the packet itself (Column 2, line 51 – 52) or to a separate program running on the processor (Column 2, lines 50 – 51). While Cohen does not disclose sending a subset of packets to an external processor for further processing, it discloses using separate processes to outsource the decision of how to handle a certain subset of the received packets. Now Bhattacharya teaches a system that includes a programmable access device and an external processor in charge of processing packets that the access device is not equipped to handle (Column 12, lines 8 – 12) so Bhattacharya discloses a processor on the access device, that receives the packet and identifies them, and it handles a subset of the packets locally, but if it receives a packet

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it cannot handle locally it forwards the decision of how to deal with the packet unto an external device to make the decision for it (Column 12, lines 8 – 12) and it discloses the motivation for performing the more complex operations on an external processor rather than on the network device, in order to have the complex decisions outsourced (Column 12, lines 8 – 10), meaning the access device isn't burdened with the complexity of having to be able to handle all of the packet processing and classification, and that an external processor can handle the decision making for multiple network elements (Column 12, lines 10 – 14), which has multiple benefits, such as making sure all the network elements are following the same rules and that there is less work making policy changes. So the combination of Cohen and Bhattacharya is proper, because they are analogous art, the motivation was not made in hindsight, because all of the motivation is contained within the references themselves, and that it would not create unnecessary complexity in Cohen, but actually reduce the complexity, because instead of forcing an network element to run a plurality of processes for each type of high level packet it might have to process, it reduces the access devices' job to see whether the dispatcher can handle to packet or pass it off to the decision makers, which are located externally.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB

KB
February 27, 2006


SALEH NAJJAR
SUPERVISORY PATENT EXAMINER